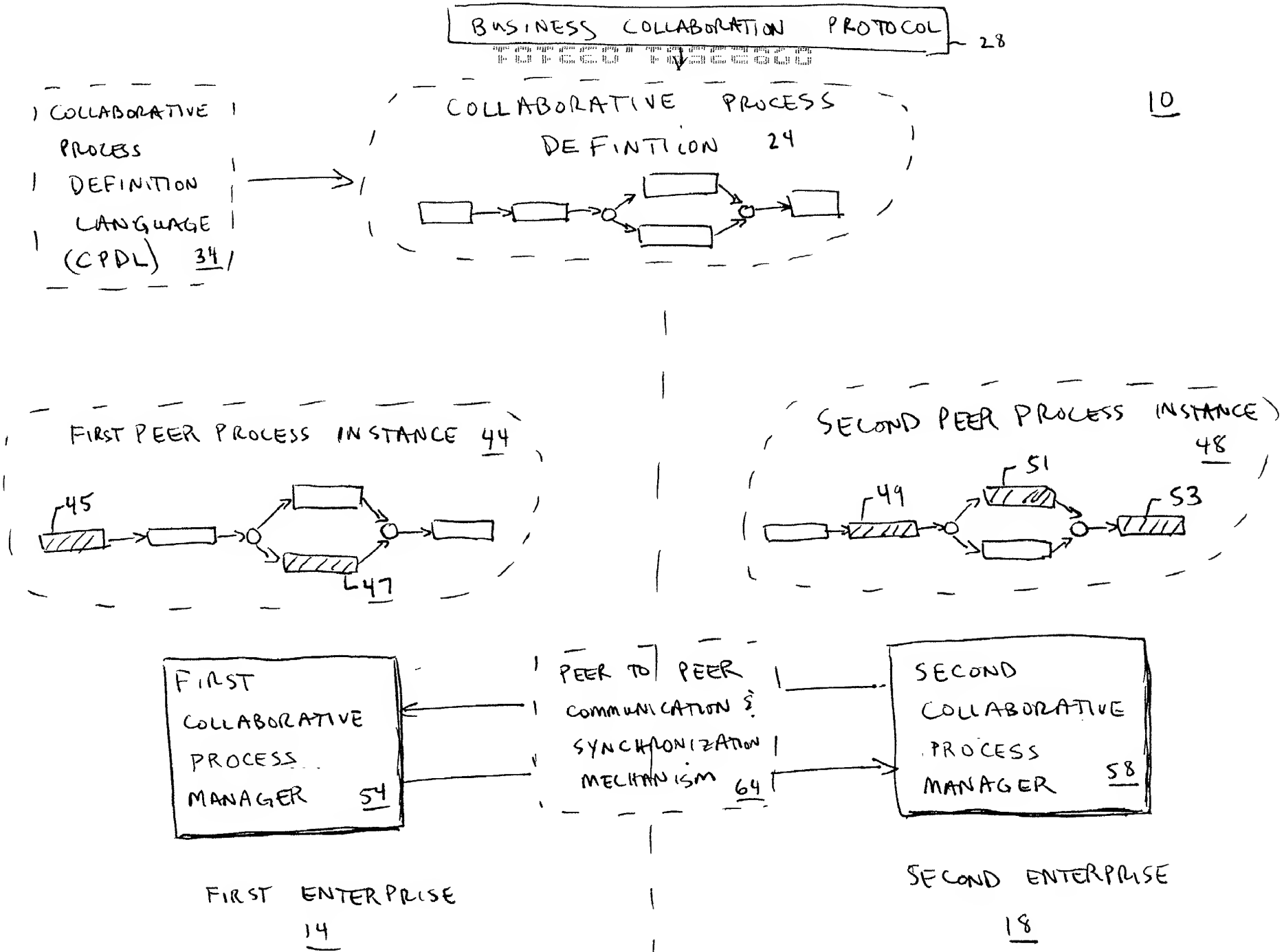

BUSINESS COLLABORATION PROTOCOL
28
COLLABORATIVE PROCESS DEFINITION LANGUAGE (CPDL) 34
COLLABORATIVE PROCESS DEFINITION 24
10
FIRST PEER PROCESS INSTANCE 44
45
47
SECOND PEER PROCESS INSTANCE 48
49
51
53
FIRST COLLABORATIVE PROCESS MANAGER 54
PEER TO PEER COMMUNICATION & SYNCHRONIZATION MECHANISM 64
SECOND COLLABORATIVE PROCESS MANAGER 58
FIRST ENTERPRISE 14
SECOND ENTERPRISE 18

FIG. 1

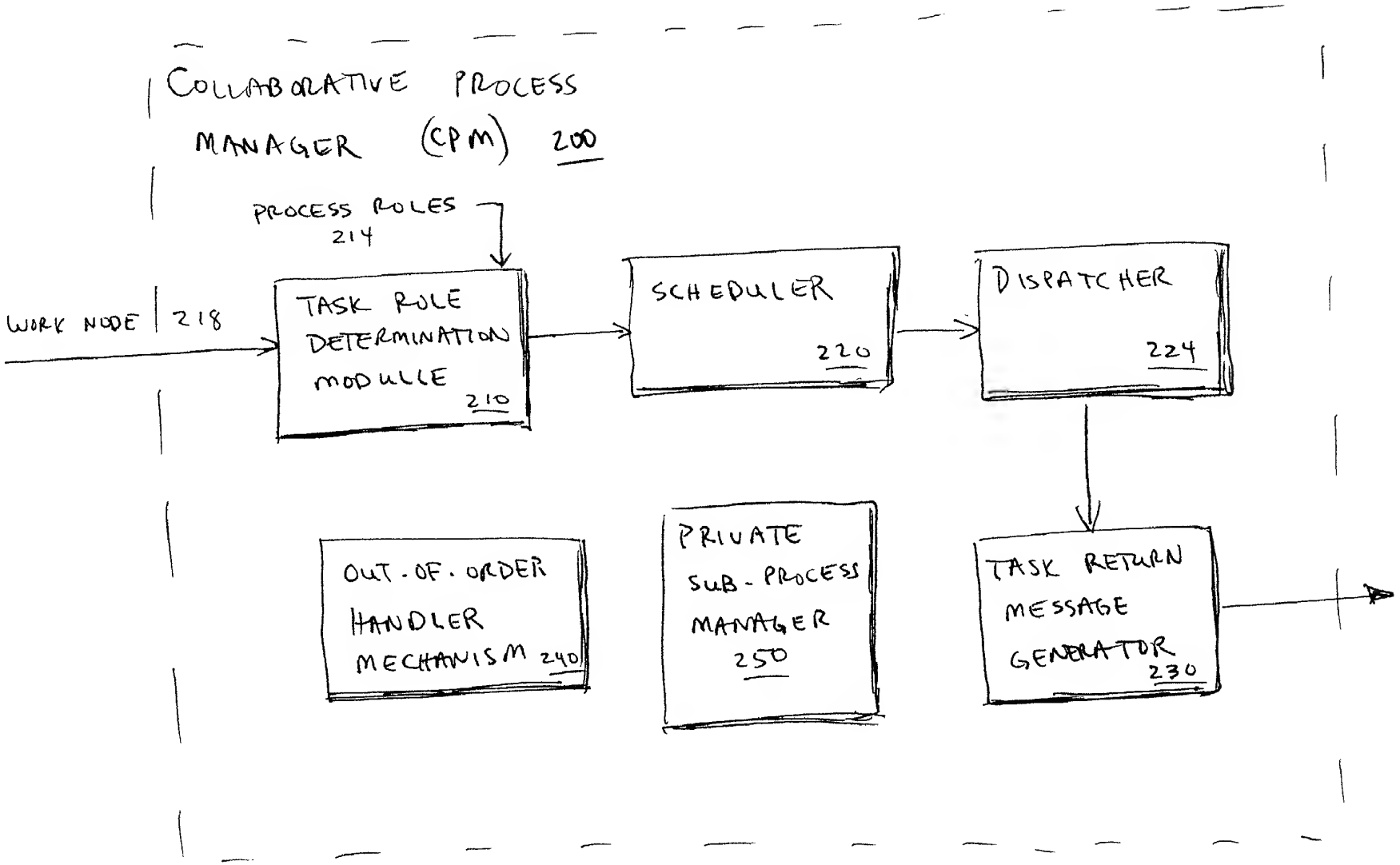

COLLABORATIVE PROCESS MANAGER (CPM) 200
PROCESS ROLES 214
WORK NODE 218
TASK ROLE DETERMINATION MODULE 210
SCHEDULER 220
DISPATCHER 224
OUT-OF-ORDER HANDLER MECHANISM 240
PRIVATE SUB-PROCESS MANAGER 250
TASK RETURN MESSAGE GENERATOR 230

FIG. 2

Define Process

Roles	Buyer, Seller
Taskrole	T1/Buyer, T2/Sell r
Proc_instant role	
Plyers	
Key	
Proc data paclet	

FIG. 3A

Create Process Instance

Roles	Buyer, Seller
Taskrole	T1/Buyer, T2/Seller
Proc_instant role	Seller
Plyers	Seller|D1/A, Buyer|D2/B
Key	
Proc data paclet	Data instances

FIG. 3B

Instantiate Peer Process Instances

Roles	Buyer, Seller
Taskrole	T1/Buyer, T2/Seller
Proc_instant role	Seller
Plyers	Seller|D1/A, Buyer|D2/B
Key	D1/A-100001
Proc data paclet	Data instances

FIG. 3C

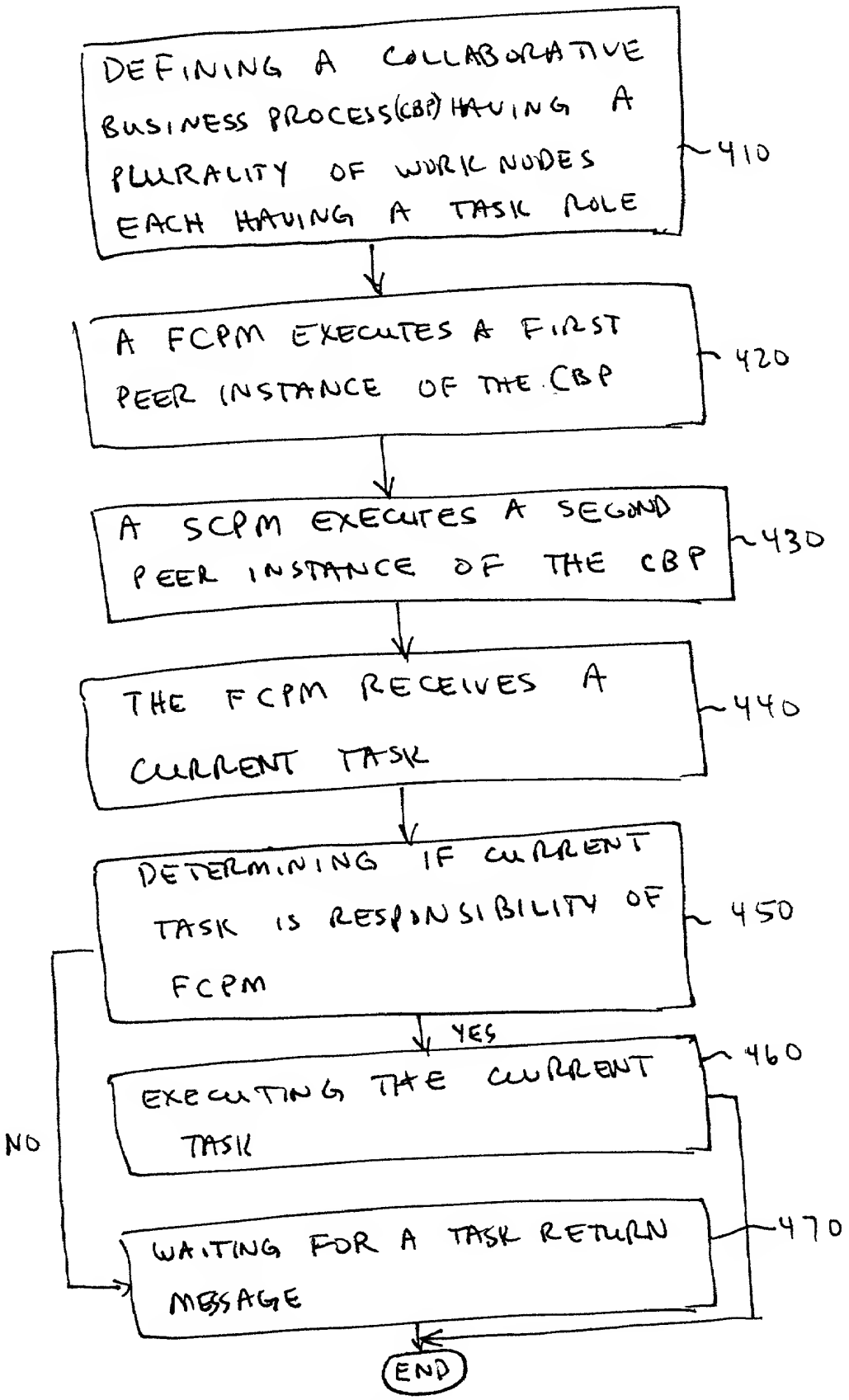

DEFINING A COLLABORATIVE BUSINESS PROCESS(CBP) HAVING A PLURALITY OF WORK NODES EACH HAVING A TASK ROLE
410
A FCPM EXECUTES A FIRST PEER INSTANCE OF THE CBP
420
A SCPM EXECUTES A SECOND PEER INSTANCE OF THE CBP
430
THE FCPM RECEIVES A CURRENT TASK
440
DETERMINING IF CURRENT TASK IS RESPONSIBILITY OF FCPM
450
YES
EXECUTING THE CURRENT TASK
460
NO
WAITING FOR A TASK RETURN MESSAGE
470
END

FIG. 4

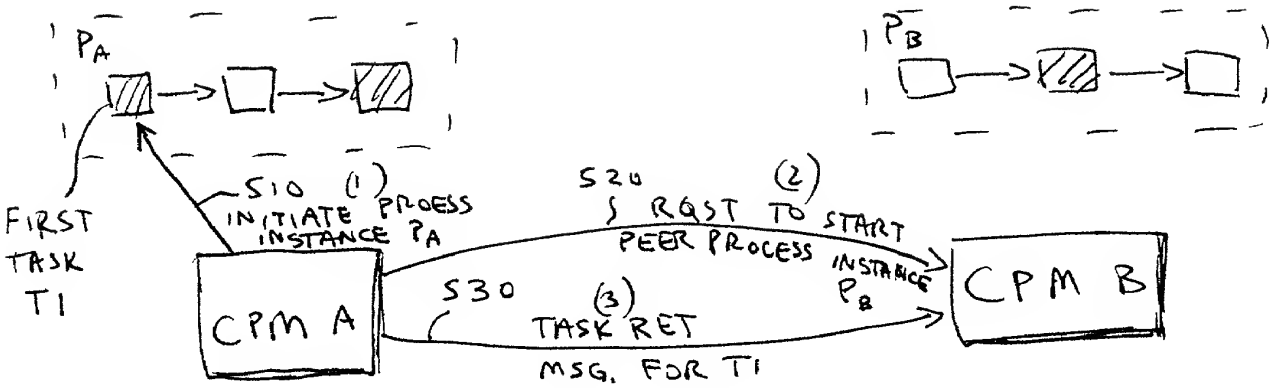
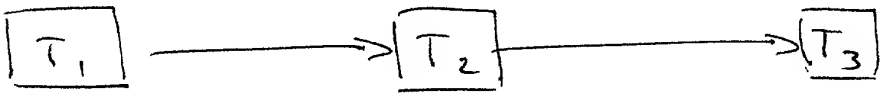

P_A
P_B
FIRST TASK T1
S10 (1) INITIATE PROCESS INSTANCE P_A
S20 (2) RQST TO START PEER PROCESS INSTANCE P_B
S30 (3) TASK RET MSG. FOR T1
CPM A
CPM B

FIG. 5


T_1
T_2
T_3

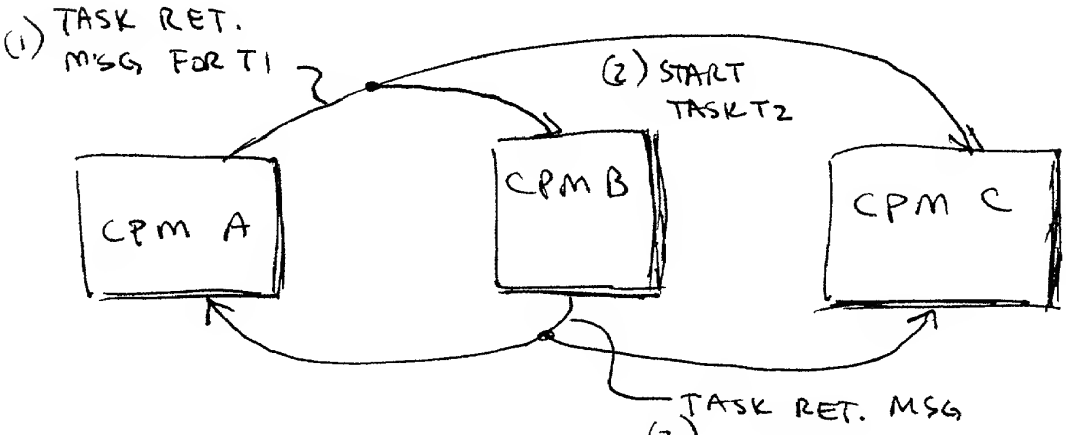

(1) TASK RET. MSG FOR T1
(2) START TASK T2
(3) TASK RET. MSG FOR T2
CPM A
CPM B
CPM C

FIG. 6

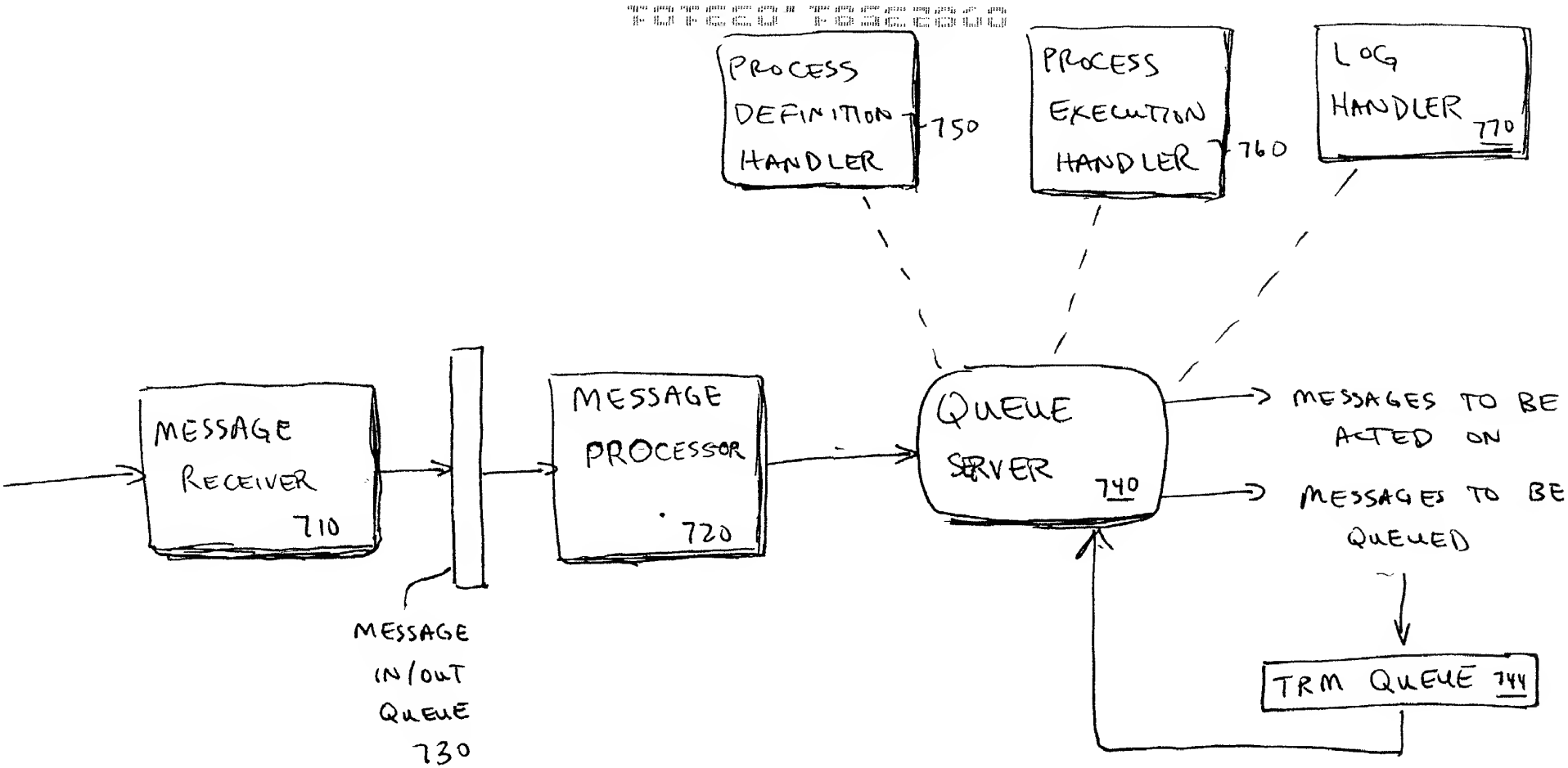

PROCESS DEFINITION HANDLER
750
PROCESS EXECUTION HANDLER
760
LOG HANDLER
770
MESSAGE RECEIVER
710
MESSAGE IN/OUT QUEUE
730
MESSAGE PROCESSOR
720
QUEUE SERVER
740
MESSAGES TO BE ACTED ON
MESSAGES TO BE QUEUED
TRM QUEUE
744

FIG. 7

PATENT PENDING

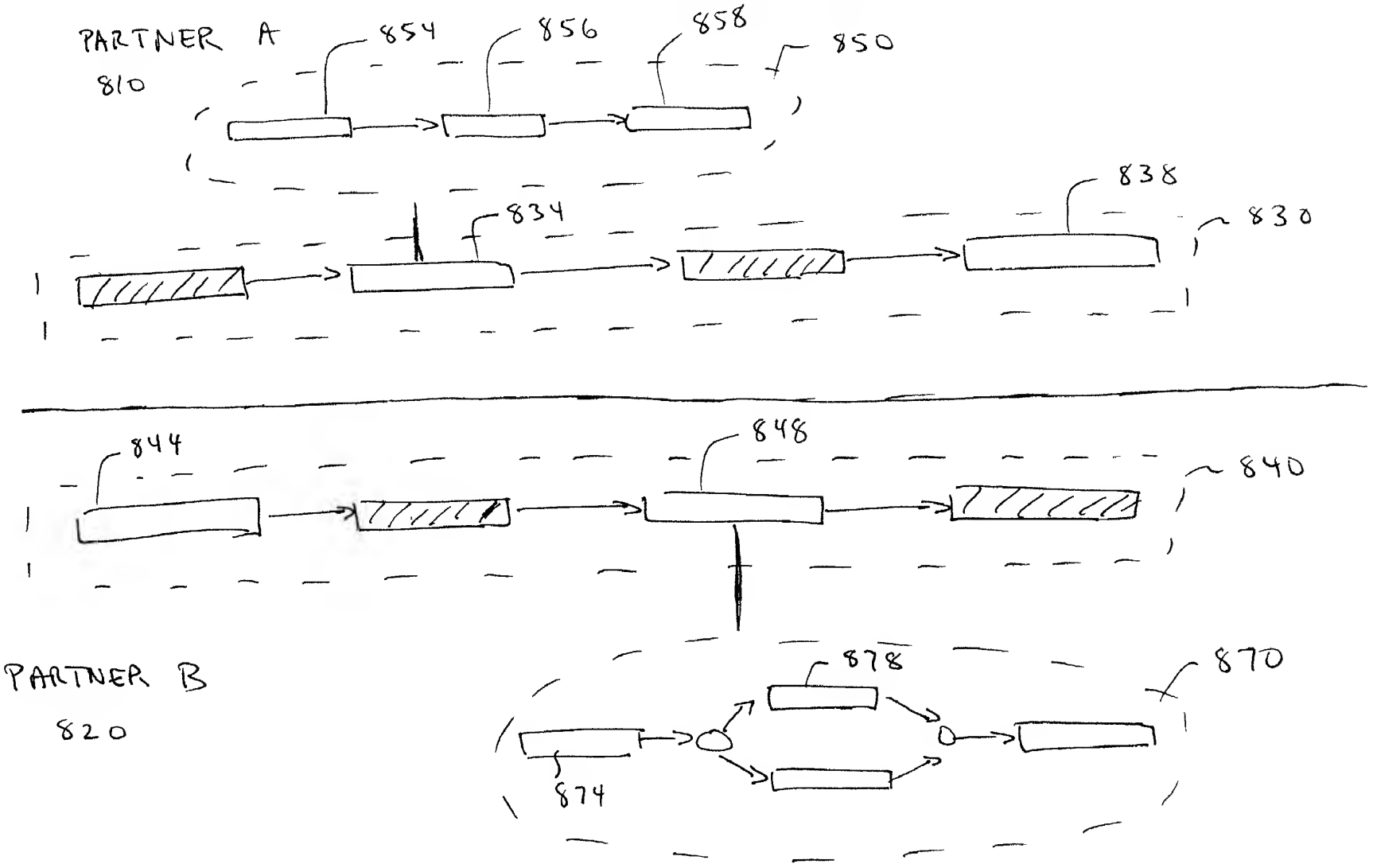


FIG. 8